

## REMARKS

The following is supplied in response to the Final Office Action mailed March 17, 2005, and the references cited therein.

Claim 18 is amended, no claims have been canceled, and no claims have been added, and as a result claims 18, 19, and 21-23 remain pending in the application. No new matter has been added.

### §102 Rejection of the Claims

Claims 18, 19, and 21-23 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,528,020 issued to Dai, et al ("Dai").

No new matter has been added to the application since the solubility of nanotubes is inherent in embodiments of the invention. For example, hybridization reactions such as those performed in the molecular characterization system of Figure 4, are performed in solution necessitating that the molecular identification assemblies 430 containing the carbon nanotubes of the present invention, be soluble in a liquid such as water (see, for example, Specification, page 5, line 20 through page 6, line 5). Additionally, the specification states, "In the characterization process, other reactive molecules 448 associated with other molecular identification assemblies 440 will not preferentially associate with the sample molecule 420. These molecular identification assemblies 440 are passed along side the sample molecule 420, and they exit the reaction chamber 410 at a chamber outlet 414." (Specification, page 6, lines 6-9) In order for the carbon nanotube assemblies (the identification assemblies) to be moved along the reaction chamber, they must be suspendable in a liquid flowing through the reaction chamber.

In contrast, Dai teaches the formation of carbon nanotubes at catalyst islands that are attached to a substrate. The resulting carbon nanotubes are also attached to the substrate via the catalytic center. Since the carbon nanotubes of Dai are attached to a substrate they are not capable of suspension in a liquid. It is believed that the section of Dai cited by the Examiner, col. 5, lines 51-63, discusses using modified carbon nanotubes as a part of a device. The carbon nanotubes of this device are attached to a substrate in

such a manner that the electrical conductance across the nanotubes can be measured. These nanotubes are attached and therefore not suspendable. The avidin that binds to the nanotubes is in a solution passing over the surface of the attached nanotubes.

### CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance and notification to that effect is earnestly requested.

Respectfully submitted,  
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By:   
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### CERTIFICATE OF MAILING

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, Post Office Box 1450, Alexandria, Virginia 22313-1450 on September 19, 2005.

  
Margaux Rodriguez September 19, 2005